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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/437,554	11/10/1999	ERLAND R. SANDSTROM	2160-(FJ-99-	8154

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EXAMINER

PATTERSON, MARC A

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 02/26/2003

19

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/437,554

Applicant(s)

SANDSTROM ET AL.

Examiner

Marc A Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6, 8-24, 26, 28-44, 46, 48-50, 74, 77-85, 90 and 91 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8-24, 26, 28-44, 46, 48-50, 74, 77-85, 90 and 91 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### WITHDRAWN REJECTIONS

1. The 35 U.S.C. 112 second paragraph rejection of Claims 1 – 4, 6, 8 – 24, 26, 28 – 44, 46, 48 – 50, 74 and 77 – 85, of record on page 2 of the previous Action, are withdrawn.

### NEW REJECTIONS

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 6, 8 – 9, 13 – 16, 26, 28 – 29, 33 – 35, 46, 48 – 50 and 90 – 91 are rejected under 35 U.S.C. 102(b) as being anticipated by Willbrandt (U.S. Patent No. 5,433,337).

With regard to Claims 1 and 50, Willbrandt discloses a container (cup, therefore a tumbler; column 1, lines 8 – 15) formed from a polymeric material (a styrene; column 6, lines 12 – 26); the cup comprises a base (it therefore forms the bottom of the cup and defines an outer edge, and comprises a base diameter; column 2, lines 3 – 18), and a sidewall (it is therefore integrally formed with the base extending upwardly from the outer edge; column 2, lines 19 – 35) having a thickness of 20 – 40 mils (0.020 to 0.040 inches; column 4, lines 35 – 53) and defining a rim about its upper extremity (the rim is therefore integrally formed with the sidewall, and is a solid polymer bead as it defines an opening; column 5, lines 10 – 20); the sidewall extends upwardly with a taper (column 3, lines 46 – 51); the opening defined by the rim has a

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diameter which is longer than the base diameter (column 4, lines 35 – 53); the rim has a thickness which is five times greater than the thickness of the adjacent portion of the sidewall (it has a thickness of 0.15 inches, which is five times greater than the thickness of the sidewall, which is 0.03 inches; it is therefore fortified; column 4, lines 35 – 53; column 5, lines 21 – 29).

As to the claimed aspects of the container being ‘injection blow molded,’ and prepared from an ‘injection molded parison,’ Willbrandt discloses that the cup is made by injection molding or blow molding (column 5, lines 30 – 34); the claimed aspects of the cup being ‘injection blow molded’, and prepared from an ‘injection molded parison,’ therefore read on Willbrandt. Furthermore, the claimed aspects of the tumbler being ‘injection blow molded’ and prepared from an ‘injection molded parison’ and the volume of the container being 1.5 – 4 times the volume of the parison are directed to process limitations, and therefore given little patentable weight.

With regard to Claims 6, 26, and 46, as stated previously, the rim has a thickness and height of 0.15 inches, which is five times the thickness of the sidewall.

With regard to Claims 8 – 9 and 28 – 29 and 48 – 49, as stated previously, the cup comprises polystyrene, and is therefore transparent.

With regard to Claims 13 – 15 and 33 – 35, as stated previously, the sidewall thickness is 20 – 40 mils.

With regard to Claim 16 the base is circular (column 3, lines 21 – 25), and the sidewall includes a pattern which alters the cylindrical character of the sidewall and is operative as a grip portion (a portion of the sidewall is fluted, and can therefore be gripped; column 3, lines 51 – 64).

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With regard to Claims 90 – 91, the rim is disclosed by Willbrandt is circular (it has a diameter,  $R_4$ ; column 47 – 53), and therefore has a circular profile and a curved profile.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 – 4, 11 – 12, 17 – 24, 30 – 32 and 37 – 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337).

With regard to Claims 2 – 4, 11 – 12, 17 – 24, 30 – 32 and 37 – 44, Willbrandt fails to disclose a container in which the ratio of the height of the tumbler to the inside diameter of the sidewall is 2 – 4, and the ratio of the height of the tumbler to the inside diameter of the sidewall is 1 – 5, and the ratio of the height of the tumbler to the inside diameter of the sidewall is 1.3 – 1.7, and the volume is 12 – 15 ounces, and the volume is 16 ounces, and the volume is 1.5 – 4 times the volume of the parison, and the height is 5.75 – 6 inches, and the height is 4.6 – 4.8 inches, and the sidewall has a taper angle of 1 – 4.5 degrees, and a taper angle of 2.75 to 4 degrees, and a taper angle of 3 degrees, and a taper angle of 2.5 – 10 degrees and a taper angle of 4.5 – 10 degrees, and a taper angle of 1 – 10 degrees. However, Willbrandt discloses a container in which the sidewall has a taper angle of less than 1 degree (the corner is tapered and has a radius of 0.0930 inch; column 3, lines 46 – 51), and a ratio of the height of the tumbler to the

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inside diameter of the sidewall of 1.75 (column 4, lines 54 – 65), and a volume of 32 ounces (column 4, lines 35 – 53) and a height of 6.9 inches (column 4, lines 35 – 53).

It therefore would have been obvious for one of ordinary skill in the art to modify the angle of taper, and the ratio of the height of the tumbler to the inside diameter of the sidewall, and the volume of the container, and therefore the volume relative to the parison, and the height, as these parameters would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result since the Willbrandt reference shows the different parameters. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

6. Claims 10 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Tyler (U.S. Patent No. 4,446,969).

Willbrandt discloses an injection blow molded container as discussed above. With regard to Claim 10, Willbrandt fails to disclose a container comprising a sidewall provided with a molded in design comprising a series of triangular ridges having a wall thickness the same as the rest of the container.

Tyler teaches the use of a series of triangular ridges (column 5, lines 13 – 29; column 6, lines 1 – 11) in an injection – molded container (the ridges are therefore molded – in; column 2, lines 35 – 44) for the purpose of providing resistance to collapse during lidding (column 2, lines 54 – 56).

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a series of triangular ridges in Willbrandt in order to provide resistance to collapse during lidding as taught by Tyler.

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With regard to the claimed aspect of the ridges 'having a wall thickness the same as the rest of the container,' Willbrandt teaches a thickness for ridges (flutes) of the container which is the same as that of the rest of the container (0.03 inches; column 3, lines 52 – 64; column 4, lines 35 – 53); the claimed aspect of the ridges 'having a wall thickness the same as the rest of the container' therefore reads on Willbrandt.

7. Claim 74 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Andersen et al. (U.S. Patent No. 5,506,046).

Willbrandt discloses a molded container comprising a styrene as discussed above. Willbrandt fails to disclose a container comprising styrene – butadiene which is filled with nanometer – sized particles having a size in the range of visible – light wavelengths.

Andersen et al teaches the use of a composition comprising styrene – butadiene (column 26, lines 17 – 25) which is filled with nanometer – sized particles having a size in the range of visible – light wavelengths (10 nanometer to 100 micrometer; column 18, lines 49 – 59); the composition is used in the making of drinking tumblers (beverage containers; column 21, lines 28 – 36); for the purpose of making containers having good strength and durability (column 21, lines 21 – 36).

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for nanometer – sized particles having a size in the range of visible – light wavelengths in Willbrandt in order to make containers having good strength and durability as taught by Andersen et al.

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8. Claims 77 – 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Mc Chesney et al (U.S. Patent No. 3,984,498).

Willbrandt discloses a molded container comprising a styrene as discussed above. With regard to Claims 77, 80 and 82, Willbrandt fails to disclose a container which consists essentially of styrene – butadiene copolymer blended with styrene – acrylonitrile copolymer and which comprises an impact modifier.

Mc Chesney teach the use of a styrene – butadiene copolymer blended with styrene – acrylonitrile copolymer (which is a rubber, and therefore constitutes an impact modifier; column 4, lines 1 – 12) in the making of a molded container (column 2, lines 22 – 39) for the purpose of making a container having improved resistance to creep strain (the bottle therefore consists essentially of the copolymer; column 1, lines 48 – 56).

With regard to Claims 78 – 79 and 81, Mc Chesney et al. fail to disclose a container in which the amount of butadiene in the copolymer is from 2 – 40 percent, and a container which consists of a blend of polystyrene – acrylonitrile with styrene – butadiene copolymer. However, Mc Chesney discloses a container in which the amount of butadiene in the copolymer is 51 percent (a major proportion; column 2, lines 51 – 61).

It would be obvious for one of ordinary skill in the art to vary the amount of butadiene in the copolymer and the amount of copolymer blend in the polymeric material, since the amount of butadiene in the copolymer and the amount of copolymer blend in the polymeric material would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end result, since the Mc Chesney reference shows the two parameters.

*In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980).*



9. Claims 83 – 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Kawakami et al. (U.S. Patent No. 6,001,439).

Willbrandt discloses an container comprising a styrene polymer as discussed above. With regard to Claims 83 – 85, Willbrandt fails to disclose a container comprising 8 – 20% by weight of a mineral filler.

Kawakami et al disclose that it is well known in the art to injection blow mold (stretch blow mold; column 13, lines 45 – 57) a polymer comprising styrene – butadiene (column 11, lines 26 – 48) comprising 0 – 50% by weight of a mineral filler (column 11, lines 8 – 25), for the purpose of forming a container which has high barrier properties (column 1, lines 5 – 18).

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for 8 – 20% by weight of a mineral filler in Willbrandt in order to form a container which has high barrier properties as taught by Kawakami et al.

10. The declaration under 37 C.F.R. 1.132 filed January 17, 2003, is insufficient to overcome the 35 U.S.C. 102(b) rejection of Claims 1, 6, 8 – 9, 13 – 16, 26, 28 – 29, 33 – 35, 46, 48 – 50 and 90 – 91 as being anticipated by Willbrandt (U.S. Patent No. 5,433,337), 35 U.S.C. 103(a) rejection of Claims 2 – 4, 11 – 12, 17 – 24, 30 – 32 and 37 – 44 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337), 35 U.S.C. 103(a) rejection of Claims 10 – 36 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Tyler (U.S. Patent No. 4,446,969), 35 U.S.C. 103(a) rejection of Claim 74 as being unpatentable over Willbrandt (U.S.

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Patent No. 5,433,337) in view of Andersen et al. (U.S. Patent No. 5,506,046), 35 U.S.C. 103(a) rejection of Claims 77 – 82 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Mc Chesney et al (U.S. Patent No. 3,984,498), 35 U.S.C. 103(a) rejection of Claims 83 – 85 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Kawakami et al. (U.S. Patent No. 6,001,439) because the evidence set forth therein fails to compare the claimed invention to the closest prior art.

The declaration provides data on impact resistance and ‘lip feel negative’ for the claimed invention, and for cups which differ from the claimed invention only with regard to the shape of the rim, and it is stated that the differences in the stated properties are obtained which are unexpected. However, no comparisons are made between the claimed invention and the prior art of record, particularly Willbrandt, regarding the differences in the stated properties. Furthermore, the ‘lip feel negative’ test, as described in the declaration, is subjective (depending on the opinions, and therefore lips, of the panelists) and therefore not possible to quantify. It is also stated that, in Applicant’s opinion, it is likely not possible to make Willbrandt by an injection blow molding process, because of the inherent complexity of the processes (page 3, paragraph 9 of the Declaration). However, no further evidence is provided in support of this position; furthermore, Willbrandt discloses injection molding and blow molding as methods of making (column 5, lines 30 – 34).

## ANSWERS TO APPLICANT'S ARGUMENTS

11. Applicant's arguments regarding the 35 U.S.C. 112 second paragraph rejection of Claims 1 – 4, 6, 8 – 24, 26, 28 – 44, 46, 48 – 50, 74 and 77 – 85, of record on page 2 of the previous Action, have been considered and have been found to be persuasive. The rejections are therefore withdrawn.

Applicant's arguments regarding the 35 U.S.C. 103(a) rejection of Claims 1 – 4, 6, 11 – 24, 26, 28 – 29, 30 – 35, 37 – 44, 46, 48 – 50 and 90 – 91 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337), 35 U.S.C. 103(a) rejection of Claims 10 and 36 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Tyler (U.S. Patent No. 4,446,969), 35 U.S.C. 103(a) rejection of Claim 74 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Andersen et al. (U.S. Patent No. 5,506,046), 35 U.S.C. 103(a) rejection of Claims 77 – 82 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Mc Chesney et al (U.S. Patent No. 3,984,498) and 35 U.S.C. 103(a) rejection of Claims 83 – 85 as being unpatentable over Willbrandt (U.S. Patent No. 5,433,337) in view of Kawakami et al. (U.S. Patent No. 6,001,439) above are directed to amended Claims 1 – 4, 6, 8 – 24, 26, 28 – 44, 46, 48 – 50, 74, 77 – 85 and 90 – 91, of record on page 2 of the previous Action, have been carefully considered but have not been found to be persuasive for the reasons set forth below.

Applicant argues, on page 4 of Paper No. 19, that the phrase 'injection blow molded' should be given consideration as a product limitation, rather than as a product – by – process limitation. Applicant submits as evidence Exhibit 3, which concerns the interbonding, by interfusion, of sand particles. However, the phrases 'interbonded by interfusion' and 'injection

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blow molded' are not related. The phrase 'interbonded by interfusion' is clearly a product limitation, as it defines a particular structure of bonding (the fusion of individual particles, rather than a separate bonding layer), but it does not necessarily follow that the phrase 'injection blow molded,' which defines product only by the process of making, is also a product limitation.

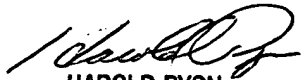
### *Conclusion*

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (703) 305-3537. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (703) 308-4251. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Marc A. Patterson, PhD.

*Marc Patterson*

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HAROLD PYON  
SUPERVISORY PATENT EXAMINER*1772**2/24/03*